Michigan Immunization Update

Summer/Fall 2004 Vol. 11, No. 2

CDC issues interim influenza vaccination recommendations

On October 5, this report was posted as an MMWR Dispatch on the MMWR website (http://www.cdc.gov/mmwr).

On October 5, 2004, CDC was notified by Chiron Corporation that none of its influenza vaccine (Fluvirin®) would be available for distribution in the United States for the 2004–2005 influenza season. The company indicated that the Medicines and Healthcare Products Regulatory Agency (MHRA) in the United Kingdom, where Chiron's Fluvirin vaccine is produced, has suspended the company's license to manufacture Fluvirin vaccine in its Liverpool facility for 3 months, preventing any release of the vaccine for this influenza season. This action will reduce by approximately one half the expected supply of trivalent inactivated vaccine (flu shot) available in the United States for the 2004–2005 influenza season.

The remaining supply of influenza vaccine expected to be available in the United States this season is approximately 54 million doses of Fluzone® (inactivated flu shot) manufactured by Aventis Pasteur, Inc. Of these doses, approximately 30 million doses already have been distributed by the manufacturer. In addition, approximately 1.1 million doses of live attenuated influenza vaccine (LAIV/FluMist®) manufactured by MedImmune will be available this season.

Because of this urgent situation, CDC, in coordination with its Advisory Committee for Immunization Practices (ACIP), is issuing interim recommendations for influenza vaccination during the 2004–2005 season. These interim recommendations were formally

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Newsletter now available by email

In an effort to cut costs, we are encouraging our readers to sign up to receive this newsletter by email. The newsletter will be sent to you as an Adobe Acrobat pdf file. To sign up, send an email to Rosemary Franklin at franklinr@michigan.gov with the word SUBSCRIBE in the SUBJECT field. You will be added to the MDCH Division of Immunization email distribution list.

People on this list receive the Michigan Immunization Update newsletters, MDCH Fall Regional Immunization Conferences brochures, and periodic immunization information updates. An added bonus is that you will receive the newsletter more promptly than subscribers who are receiving their newsletters through regular mail. For more information, please call Rosemary Franklin at 517-335-9485.

PCV7 vaccine shortage resolved

Since February 2004, CDC has recommended that pneumococcal conjugate vaccine (PCV7) be administered to healthy children on an abbreviated schedule to conserve the limited supply. Production capacity has been increased, and supply is now sufficient to meet the national demand for vaccine on the routine, 4-dose schedule. Effective immediately, CDC, in consultation with the Advisory Committee on Immunization Practices, the American Academy of Family Physicians, and the American Academy of Pediatrics, recommends that providers resume administration of PCV7 according to the routine schedule.

See page 11 for PCV7 catch-up schedule

A catch-up schedule for children who are incompletely vaccinated is included on page 11. It has also been posted on the CDC website at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5336a8.htm.

The highest priority for catch-up vaccination is to ensure that children aged <5 years of age at high risk for invasive pneumococcal disease because of certain immunocompromising or

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recommended by ACIP on October 5 and take precedence over earlier recommendations.

Priority Groups for Influenza Vaccination

The following priority groups for vaccination with inactivated influenza vaccine this season are considered to be of equal importance and are:

- all children aged 6–23 months;
- adults aged >65 years;
- persons aged 2–64 years with underlying chronic medical conditions;
- all women who will be pregnant during the influenza season;
- residents of nursing homes and long-term care facilities;
- children aged 6 months–18 years on chronic aspirin therapy;
- health-care workers involved in direct patient care; and
- out-of-home caregivers and household contacts of children aged <6 months.

Other Vaccination Recommendations

- Persons in priority groups identified above should be encouraged to search locally for vaccine if their regular health-care provider does not have vaccine available.
- Intranasally administered, live, attenuated influenza vaccine, if available, should be encouraged for healthy persons who are aged 5–49 years and are not pregnant, including health-care workers (except those who care for severely immunocompromised patients in special care units) and persons caring for children aged <6 months.
- Certain children aged <9 years require 2 doses of vaccine if they have not previously been vaccinated. All children at high risk for complications from influenza, including those aged 6–23 months, who are brought for vaccination, should be vaccinated with a first or second dose, depending on vaccination status. However, doses should not be held in reserve to ensure that 2 doses will be available. Instead, available vaccine should be used to vaccinate persons in priority groups on a first-come, first-serve basis.

Vaccination of Persons in Nonpriority Groups

Persons who are not included in one of the priority groups described above should be informed about the urgent vaccine supply situation and asked to forego or defer vaccination.

Persons Who Should Not Receive Influenza Vaccine

Persons in the following groups should not receive influenza vaccine before talking with their doctor:

- persons with a severe allergy (i.e., anaphylactic allergic reaction) to hens' eggs and
- persons who previously had onset of Guillain-Barré syndrome during the 6 weeks after receiving influenza vaccine.

For more information

Additional information is available at http://www.cdc.gov/flu or through the CDC public response hotline, telephone 888-246-2675 (English), 888-246-2857 (Español), or 866-874-2646 (TTY).

Flu shots critical for persons with diabetes and their family members

The Centers for Disease Control and Prevention (CDC) recommends that adults and children with chronic medical conditions, such as diabetes, receive a flu shot in October or November of every year. Vaccinating individuals at high risk just before the influenza season each year is the most effective measure for reducing the impact of the flu. CDC also recommends early flu vaccination for adults and children who are household contacts or caregivers of people with diabetes. When family members get a flu shot, it helps to keep them healthy and protects the person with diabetes from catching the flu.

Pneumococcal polysaccharide vaccine is recommended for anyone 2 years of age or older who has diabetes or another high-risk condition. While most people will only need one pneumococcal polysaccharide shot over the course of their lifetime, this may not be the case for people with diabetes. A one-time revaccination is recommended for people with diabetes 65 years of age or older who were previously immunized when they were younger than 65, if the vaccine was administered more than five years ago. It is important to remember that a person should receive no more than two doses of the polysaccharide pneumococcal vaccine (PPV23) in his or her lifetime and the two doses must be spaced at least five years apart. Also, the new conjugated pneumococcal vaccine (PCV7) is recommended for all children who are 2-59 months of age.

A pneumococcal shot and an annual flu shot could prevent complications and death associated with pneumonia and influenza. Make flu and pneumococcal vaccination for people with diabetes – and their family and household contacts – a priority this flu season.

For more information, contact CDC at 1-877-CDC-Diab or http://www.cdc.gov/nip/flu.

PCV7 shortage resolved

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chronic conditions (e.g., sickle cell disease, asplenia, chronic heart or lung disease, diabetes, cerebrospinal fluid leak, cochlear implant, or human immunodeficiency virus infection) are fully vaccinated. Second priorities include vaccination of healthy children aged <24 months who have not received any doses of PCV7 and vaccination of healthy children aged <12 months who have not yet received 3 doses.

Programs that provide vaccinations but do not see children routinely for other reasons should consider a notification process to contact undervaccinated children.

Efficacy of trivalent (inactivated) influenza vaccine (TIV)

Population	Efficacy of TIV against influenza illness
1-15 years	77% – 91%
Healthy adults under age 65	70% – 90%
Population	**Efficacy of TIV against hospitalization for pneumonia or influenza**
Noninstitutionalized elderly	30% – 70%
Institutionalized elderly	50% – 60%

Surveillance update from the 2003-2004 flu season

According to Michigan's influenza sentinel surveillance sites, levels of influenza-like illness (ILI; fever = 100º F with cough, sore throat, or both) began increasing in the 2nd week of December, peaked near the end of December, and returned to low levels in mid-January. Although there was speculation that a second wave of influenza would occur later in the season, that did not happen.

All 137 influenza viruses subtyped by the Michigan Department of Community Health (MDCH) Bureau of Laboratories during the 2003-2004 season were the H3N2 subtype of influenza A. Only 20 of these were strain-typed by CDC, but 16 of those were related to the new Fujian H3N2 strain, which incompletely matches the H3N2 strain in last season's trivalent influenza vaccine. The remaining 4 viruses matched the H3N2 vaccine strain. These results suggest that the Fujian strain was the dominant circulating strain last season. The 2004-2005 season's influenza vaccine will protect against the Fujian strain specifically, as well as an H1N1 strain and an influenza B strain.

Data from CDC indicate that the United States had similar experiences to Michigan in the 2003-2004 season, although most states saw their ILI levels increase earlier than Michigan's. Of the 7,191 influenza A viruses subtyped by collaborating laboratories in the U.S., all but two were subtype H3N2. CDC strain-typed 949 of these H3N2 viruses and found that 89 percent resembled the new Fujian H3N2 strain; the remainder resembled the vaccine H3N2 strain. Very few influenza B viruses were detected. National pneumonia and influenza mortality data indicate that the 2003-2004 flu season was of moderate severity.

Early 2004 was also notable for outbreaks in poultry of highly pathogenic avian influenza (HPAI), subtype H5N1, in several Asian countries. This is important because widespread avian influenza increases the chance of avian and human viruses exchanging genetic material. That could produce a new strain of influenza that could spread rapidly among humans worldwide, resulting in a pandemic. Although 34 persons in Thailand and Vietnam contracted avian influenza in 2004, and 23 of them died, there is no evidence that it was transmitted person-to-person. In late June and early July of 2004, more outbreaks of avian influenza in poultry were confirmed in China, Thailand, and Vietnam.

Some non-H5N1 avian influenza outbreaks were also detected in North American poultry farms in early 2004. Avian influenza outbreaks are infrequent in Michigan; the most recent one occurred about two years ago.

To access information from MDCH about influenza, go to the MDCH homepage at http://www.michigan.gov/mdch and search for "influenza". The most current U.S. influenza data are available from the CDC at http://www.cdc.gov/flu/weekly/fluactivity.htm.

Clinicians needed to share influenza surveillance information

The Influenza Sentinel Provider Surveillance Network is a cornerstone of influenza surveillance in Michigan. It consists of health care providers who have volunteered to provide the Michigan Department of Community Health (MDCH) and the CDC with weekly counts of visits to their practices for influenza-like illness (fever = 100º with cough, sore throat, or both). They also provide nasal swabs from a subset of patients for respiratory virus testing by MDCH. The duties usually require less than 30 minutes per week. Clinicians in nearly any type of practice are eligible, and those who see a broad age range of patients are particularly desired.

Effective influenza surveillance can prevent death and disease by detecting unusual viral strains, tracking the spread of epidemics or pandemics, and by assessing the effectiveness of influenza control programs. For these reasons, MDCH urges Michigan clinicians to volunteer. If you are interested in participating or would like additional information, please contact Kyle Enger, M.P.H., Vaccine Preventable Disease Epidemiologist, at 517-335-8159 or engerk@michigan.gov.

Ottawa County Health Department working to improve day care immunization rates

Contributed by Julie Kuiper, R.N., B.S.N., Lori Schrader, R.N., B.S.N., and Sue Schryber, R.N., B.S.N., Ottawa County Health Department

In an effort to improve the immunization rates in the county's day cares and preschools, several nurses at the Ottawa County Health Department (OCHD) have begun contacting and making site visits to daycare and preschool providers (DCPP). When investigating DCPP's IP101 reports (mandatory immunization reporting for daycare and preschools), the nurses realized that many of the DCPPs with low percentages really didn't have as many incomplete children as their reports showed. When the children with incomplete records were assessed using the Michigan Childhood Immunization Registry (MCIR), the nurses were able to increase the number of completely immunized children in several DCPPs by more than 20 percent.

A typical site visit lasts only 20-30 minutes, with a preparation time of about the same, depending on the size of the DCPP and the number of incomplete immunization records that need to be evaluated. The following information is covered and provided to the DCPP at the site visit:

- Devastating effects of vaccine-preventable diseases
- Vaccine Terminology and Required Childhood Immunizations handouts from the AIM Kit
- Brochure entitled "They Need How Many Shots?" (written by OCHD)
- The DCPP's updated immunization records obtained by the nurse from MCIR
- "Read-only" MCIR form with the fax number of where to send the completed form for processing

During the site visit, the nurse informs the daycare director of some of the benefits of checking the children's records in MCIR:

- less time spent on updating children's records
- less time spent contacting parents about incomplete immunization records
- the immunization rate of the center or school will increase

Hence, the DCPP will be able to focus on the children who are truly not up to date on their immunizations and will be able to use their high immunization rates as a selling point for parents interested in their program. Most DCPPs have been very receptive to these visits from the local health department nurses, since they often feel overwhelmed with the immunization schedule and reporting process. The nurse follows up with the DCPP within a month after the initial visit to address any additional questions or concerns.

In Ottawa County, the primary focus has been working with the daycare providers who have the lowest percentage of completely immunized children. Eventually, the health department hopes to be able to contact all DCPPs who are less than 100 percent compliant. The OCHD has found that it helps the DCPP to have a contact person and a friendly face to associate with the health department. It has been a valuable outreach tool to encourage DCPPs to continue keeping their records up to date and increase reporting compliance.

Do you have your 2004 AIM Provider Tool Kit yet?

There are 3 ways that you can order an AIM Provider Tool Kit:

1) Order online at: http://hpclearinghouse.org
2) Call 1-888-76-SHOTS
3) Use the order form on pages 13-14

FamilyCare Doctors in Marquette uses MCIR to raise immunization rates

Contributed by Jim LaJoie, Media Coordinator of Marquette General Health System in Marquette

The staff at FamilyCare Doctors enjoys helping children. In their eyes, one of the best ways to lend a helping hand is by making sure children are receiving their immunizations on time to target vaccine preventable illnesses. "We have a real interest in this," said Jeff Sergey, Senior Clinic LPN at FamilyCare Doctors in Marquette, a service of Marquette General Health System. "Some childhood diseases simply do not have to happen. We can have control over them."

The clinic staff's devotion and tireless dedication to childhood immunizations is reflected in their remarkable improvement in immunization compliance since being assessed by the Michigan Department of Community Health's (MDCH) Assessment Feedback Incentives Exchange (AFIX) team. As part of this voluntary immunization assessment service, the immunization status of pediatric patients is assessed for compliance (completeness of required vaccines, based on a specific age cohort). One of the tools used to gauge this compliance is the Michigan Childhood Immunization Registry (MCIR).

In 2001, the MDCH AFIX team conducted an assessment and concluded that FamilyCare Doctors fell below Michigan and national averages for the percentage of children 19 to 36 months of age who were up to date on their immunizations. That dose of discouraging news caught the attention of Practice Manager Carol Bowling, RN, BSN, and the clinic staff. As a result, the FamilyCare Practice Group made it a priority to work more closely with the regional MCIR office and the staff of the Marquette County Health Department to improve the vaccination rates of its pediatric patients.

"The children's shots weren't up to date, and we wanted to find a way to change that," Bowling said. "We reviewed our pediatric records for complete immunization documentation, entered missing data into MCIR, assessed immunization status at each visit, and made personal phone calls to parents recommending appointments for immunization catch up. Within one year, our immunization rate for children 19 to 36 months of age improved from 44 to 70 percent." By 2003, the immunization rate had risen to 83 percent.

Currently, FamilyCare Doctors' immunization rate is an outstanding 94 percent. The immunization rate is derived from the MCIR Provider Profile Report by Roster, 19 to 36 months, 4:3:1:3:3:1. (This means that ninety-four percent of the practice's children in this age cohort are protected with 4 doses of DTaP, 3 doses of polio, 1 dose of MMR, 3 doses of Hib, 3 doses of hepatitis B, and 1 dose of varicella vaccine.)

"We constantly update our information, and have formed a physician/nursing sub-committee to look at various vaccines to determine what works best in our practice," Sergey said. "One focus of our practice is to have the best childhood immunization rates."

Julie Clark, MCIR Region 6 coordinator, said FamilyCare Doctors has done a tremendous job in improving their immunization rates and staying on top of record keeping. "FamilyCare Doctors is always looking for ways to broaden their usage of MCIR to better their levels," Clark said. "They are one of two providers in the Upper Peninsula with the highest MCIR assessment levels, and that in itself is an awesome feat."

The staff at FamilyCare Doctors are devoted to protecting their patients from vaccine preventable diseases

Sergey has been asked to give a presentation at the MDCH Fall Immunization Conference on October 7 in Marquette. He will address how FamilyCare Doctors has used MCIR to increase their pediatric patient immunization levels.

Task force active in Kalamazoo

Contributed by Lynne Norman, RN, Communicable Disease Consultant, Kalamazoo County Human Services Department

During the winter of 2000, the Kalamazoo County Human Services Department (KCHSD) invited health care provider offices, hospitals, and aging and home health agencies to come together to coordinate efforts to increase the number of adults receiving influenza, pneumonia and tetanus diphtheria (Td) vaccines. The task force was formed with members from Bronson Hospital, Borgess CorpFit, Area Agency on Aging Region 3A, Borgess Visiting Nurses Association, United Nursing Services, Borgess ProMed offices, Chief Medical Officer for Kalamazoo County, Public Health Preparedness Director (joined later), and public health nurses. Through the task force members, KCHSD has been able to reach all the hospitals in the county, the majority of healthcare provider offices, the major home health agencies and all the major providers of influenza vaccine.

Because all of the task force members are on an email distribution list, KCHSD is able to distribute timely immunization information, such as CDC's Influenza Bulletins, to the group very quickly. The members then disseminate the information within their organizations. Educational mailings have been sent to the group using inter-office mail at no cost to the public health department. Posters for health care providers' waiting rooms, information about vaccine standing orders, and newly released immunization information have been distributed to the members using inter-office mail.

In the fall of 2003, KCHSD put up billboards emphasizing the need for adult immunizations. The billboards were placed in the areas of Kalamazoo with the lowest immunization rates for adults. A task force member provided the funding for the billboards. A mailing was also sent to homes with persons 60 years of age or older in targeted zip codes, educating them about the need for influenza vaccination. The response to the letter was excellent. Once again, committee members covered the cost of the mailing.

During flu season, all of the coalition members who provide influenza vaccine post each other's flu hotline numbers on their web pages. The coalition members identify whom their targeted patients are (e.g., pediatrics, elderly, etc), in order to make sure that all populations are being served. From discussions at the task force meetings, it became apparent that although older populations were being adequately served, no one was offering flu vaccine to children in community outreach clinics. KCHSD met with local school districts and Visiting Nurses Association (VNA) to set up school based flu clinics. VNA nurses vaccinate persons over 18 and public health nurses vaccinate those under 18 years of age.

During years of vaccine delay or shortage issues, all the task force members agree to follow the same protocols and CDC recommendations. This gives a consistent, unified message to the community when dealing with difficult flu seasons.

The task force has simplified communication between public health and the private health care providers. It has grown beyond adult immunizations, and has created a strong communication bond between the public health department and community health care providers.

MDCH Division of Immunization welcomes Dr. Gary Kirk

The Michigan Department of Community Health (MDCH) is pleased to announce that Gary Kirk, M.D., M.P.H. has accepted the position of Director of the Division of Immunization. Dr. Kirk had his educational training at MIT and McGill University and did his pediatric residency at the University of Michigan's Mott Hospital and Baylor College of Medicine in Texas. He is board certified in pediatrics and is a Fellow of the American Academy of Pediatrics. He has previously served on the pediatrics faculty of the University of Chicago, the University of Illinois, and Michigan State University and is the previous program director of the pediatrics residency for Spectrum Health/Michigan State University. He has an active research interest in pediatric pulmonary disease with special focus on asthma and has worked with the public health community extensively in this area. He was named the 2000 Professional of the Year by the American Lung Association of Michigan and received the 2003 Outstanding New Professional Award from Western Michigan University. He comes to MDCH from his position as Director of Health Services for Western Michigan University where he directed a staff of 110 persons.

Varicella vaccine proves its worth

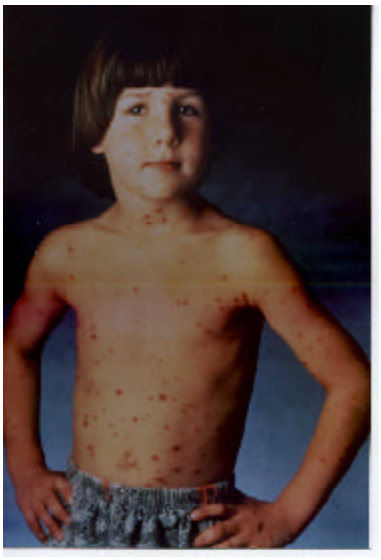
"The varicella vaccine lives up to its promise of preventing most cases, even though some vaccinated individuals can develop chickenpox," concluded a disease investigation of a chickenpox outbreak that occurred earlier this year in a Michigan elementary school. Moreover, the vaccine does a very good job of preventing severe illness in cases that do occur in vaccinated persons.

Varicella vaccine was licensed for use in the U.S. in 1995, and soon after was recommended for inclusion in the routine series of childhood immunizations. Use of the vaccine increased steadily in subsequent years, with recent surveys indicating coverage levels among Michigan 2-year-old children at approximately 89 percent. This, in turn, has resulted in a significant drop in the annual incidence of the disease (see Figure 1). Compared to the years before the vaccine was available, disease levels in the state have declined by 80 percent.

In recent years, several outbreaks among groups or populations with high levels of immunization, including the one in Michigan, have been investigated. These situations have provided an opportunity to learn more about the real world performance of the varicella vaccine and may eventually contribute to changes in immunization strategies for this highly contagious disease.

The outbreak investigated in Michigan occurred in the late fall of 2003. The varicella immunization coverage level among the student population was 88 percent at the start of the school year. In total, 73 cases were identified at the school.

The investigation found the varicella vaccine was about 85 percent effective in preventing infection with the virus in this outbreak. As has been found in other such outbreak investigations, some cases did occur among previously vaccinated children. However, these instances of apparent vaccine failures – sometimes referred to as breakthrough disease – were milder than the chickenpox cases that occurred among children who had not been vaccinated. For example, cases in vaccinated children had fewer lesions (pox marks), were less likely to have fever, and spent fewer days in bed and out of school than cases in children who had not been previously vaccinated. The vaccine effectiveness at preventing moderate to severe varicella disease was found to be about 97 percent.



This child appears to have a relatively mild case of chickenpox. However, no one can predict which children will come down with complications from chickenpox.

These findings are consistent with most of the other outbreaks that have been investigated to date. Vaccine effectiveness has ranged from 44–100 percent, with most in the 70–95 percent range, which is similar to the level of protection predicted by clinical trials of the vaccine before it was licensed. As in the Michigan outbreak, other studies of outbreaks have shown the vaccine to be valuable in preventing severe cases of disease and complications when it didn't prevent chickenpox altogether.

The Michigan investigation also found that those children who received their varicella vaccinations 4 or more years before the start of the outbreak were

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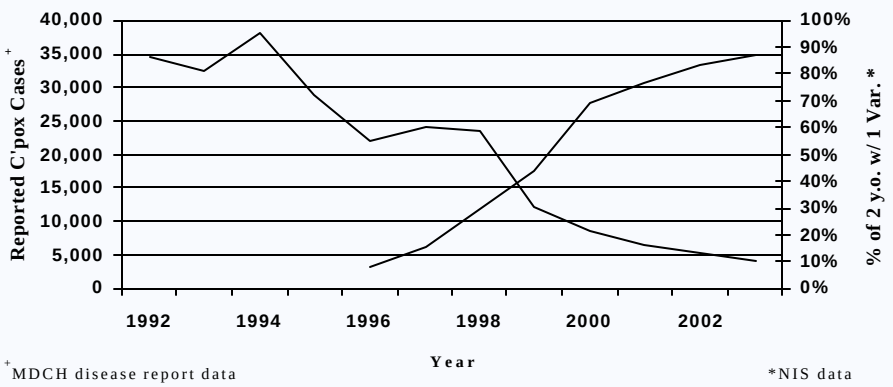
Reported Chickenpox and 2 y.o. Varicella Vx Coverage, 1992 – 2003, Michigan



+MDCH disease report data

*NIS data

Varicella vaccine

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more likely to experience breakthrough disease than those immunized more recently. This suggests there may be some waning, or wearing off, of protection over time. Some investigators have speculated a second dose of the vaccine may be helpful in boosting immunity and improving the performance of the vaccine. In fact, two doses are recommended for persons receiving the first dose at or after 13 years of age, because studies found this improved the vaccine's efficacy in adolescents and adults.

However, experts caution that more study is needed before considering any changes to the current recommendations for children. At this time, it is important that immunization providers know that the official recommendation of the Advisory Committee on Immunization Practices continues to be a single dose of the vaccine for persons under 13 years of age.

Meanwhile, immunization officials say the findings of the Michigan and other outbreak investigations are reassuring and show that the varicella vaccine is preventing many infections entirely, limiting the severity of illness in cases that do occur, and significantly decreasing the annual number of cases of this once very common childhood illness.

IOM: No association found between autism and MMR vaccine

Reprinted from the Immunization Action Coalition's online newsletter, the IAC Express (Issue 461, May 24, 2004)

On May 17, 2004, the Institute of Medicine (IOM) of the National Academies released its third report about vaccines and autism, "Immunization Safety Review: Vaccines and Autism." The report states that based on a thorough review of clinical and epidemiological studies, neither the mercury-based vaccine preservative thimerosal nor the measles-mumps-rubella (MMR) vaccine is associated with autism.

"The overwhelming evidence from several well-designed studies indicates that childhood vaccines are not associated with autism," said committee chair Marie McCormick, Sumner and Esther Feldberg Professor of Maternal and Child Health, Harvard School of Public Health, Boston. "We strongly support ongoing research to discover the cause or causes of this devastating disorder. Resources would be used most effectively if they were directed toward those avenues of inquiry that offer the greatest promise for answers. Without supporting evidence, the vaccine hypothesis does not hold such promise."

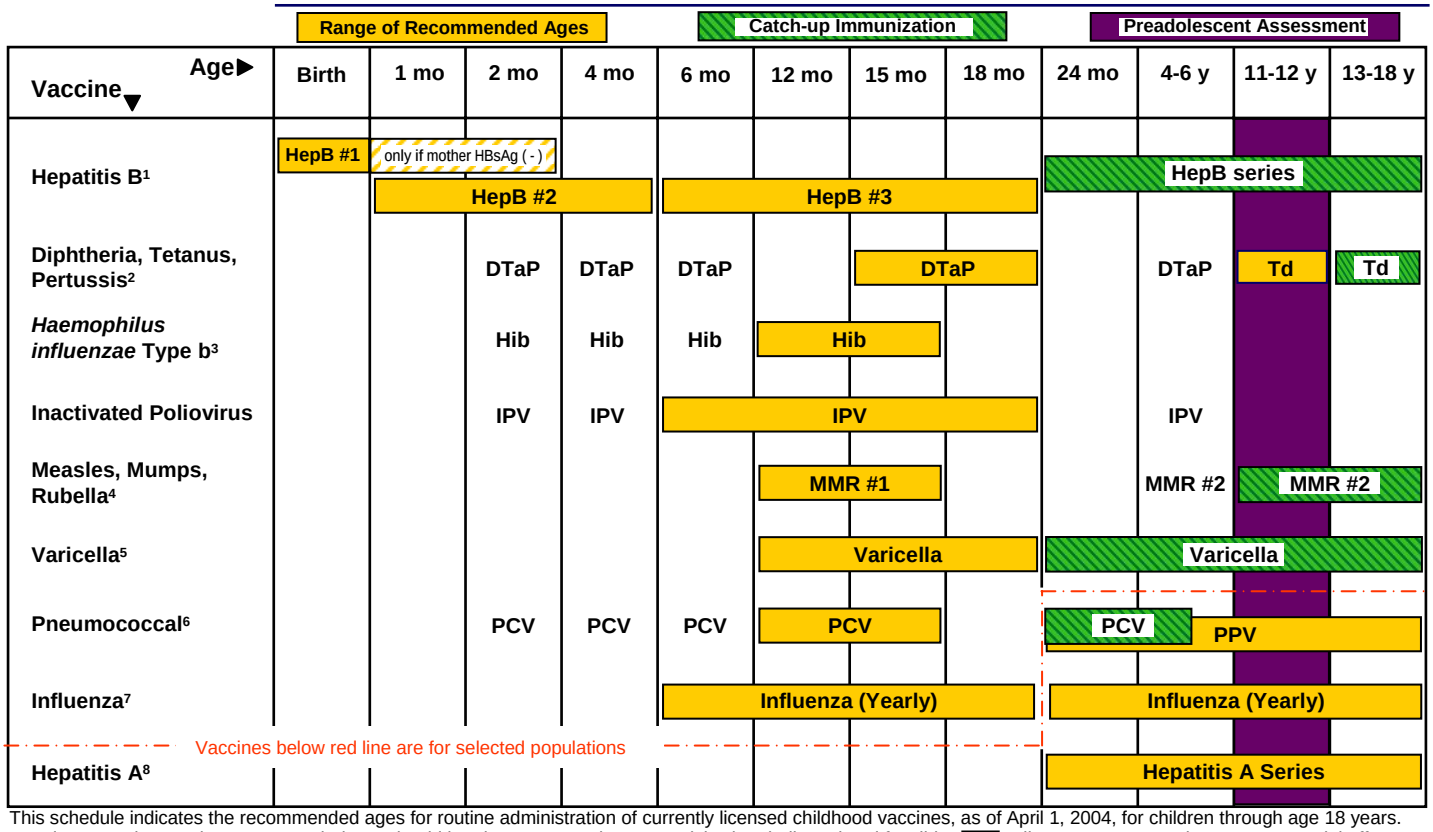
A summary of this report is available online at www.iom.edu. You can also obtain a copy from the National Academies Press by calling 1-888-624-8373 or 202-334-3313.

Number of reported cases of vaccine preventable diseases, Michigan 2004

(Year-to-date as of 8/24/04)

Disease	Total cases, year-to-date
Chickenpox (varicella)	2,539
Diphtheria	0
H. influenzae invasive disease	13
Measles	0
Mumps	2
Pertussis	90
Polio	0
Rubella	0
Tetanus	0

Recommended Childhood and Adolescent Immunization Schedule
United States · July–December 2004



This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of April 1, 2004, for children through age 18 years. Any dose not given at the recommended age should be given at any subsequent visit when indicated and feasible. Indicates age groups that warrant special effort to administer those vaccines not previously given. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and the vaccine's other components are not contraindicated. Providers should consult the manufacturers' package inserts for detailed recommendations. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete a VAERS form can be found on the Internet: www.vaers.org or by calling 800-822-7967.

1. Hepatitis B (HepB) vaccine. All infants should receive the first dose of hepatitis B vaccine soon after birth and before hospital discharge; the first dose may also be given by age 2 months if the infant's mother is hepatitis B surface antigen (HBsAg) negative. Only monovalent HepB can be used for the birth dose. Monovalent or combination vaccine containing HepB may be used to complete the series. Four doses of vaccine may be administered when a birth dose is given. The second dose should be given at least 4 weeks after the first dose, except for combination vaccines which cannot be administered before age 6 weeks. The third dose should be given at least 16 weeks after the first dose and at least 8 weeks after the second dose. The last dose in the vaccination series (third or fourth dose) should not be administered before age 24 weeks.

Infants born to HBsAg-positive mothers should receive HepB and 0.5 mL of Hepatitis B Immune Globulin (HBIG) within 12 hours of birth at separate sites. The second dose is recommended at age 1–2 months. The last dose in the immunization series should not be administered before age 24 weeks. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) at age 9–15 months.

Infants born to mothers whose HBsAg status is unknown should receive the first dose of the HepB series within 12 hours of birth. Maternal blood should be drawn as soon as possible to determine the mother's HBsAg status; if the HBsAg test is positive, the infant should receive HBIG as soon as possible (no later than age 1 week). The second dose is recommended at age 1–2 months. The last dose in the immunization series should not be administered before age 24 weeks.

2. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine. The fourth dose of DTaP may be administered as early as age 12 months, provided 6 months have elapsed since the third dose and the child is unlikely to return at age 15–18 months. The final dose in the series should be given at age ≥4 years. **Tetanus and diphtheria toxoids (Td)** is recommended at age 11–12 years if at least 5 years have elapsed since the last dose of tetanus and diphtheria toxoid-containing vaccine. Subsequent routine Td boosters are recommended every 10 years.

3. *Haemophilus influenzae* type b (Hib) conjugate vaccine. Three Hib conjugate vaccines are licensed for infant use. If PRP-OMP (PedvaxHIB or ComVax [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required. DTaP/Hib combination products should not be used for primary immunization in infants at ages 2, 4 or 6 months but can be used as boosters following any Hib vaccine. The final dose in the series should be given at age ≥12 months.

4. Measles, mumps, and rubella vaccine (MMR). The second dose of MMR is recommended routinely at age 4–6 years but may be administered during any visit, provided at least 4 weeks have elapsed since the first dose and both doses are administered beginning at or after age 12 months. Those who have not previously received the second dose should complete the schedule by the visit at age 11–12 years.

5. Varicella vaccine. Varicella vaccine is recommended at any visit at or after age 12 months for susceptible children (i.e., those who lack a reliable history of chickenpox). Susceptible persons age ≥13 years should receive 2 doses, given at least 4 weeks apart.

6. Pneumococcal vaccine. The heptavalent **pneumococcal conjugate vaccine (PCV)** is recommended for all children age 2–23 months. It is also recommended for certain children age 24–59 months. The final dose in the series should be given at age >12 months. **Pneumococcal polysaccharide vaccine (PPV)** is recommended in addition to PCV for certain high-risk groups. See *MMWR* 2000;49(RR-9):1-35.

7. Influenza vaccine. Influenza vaccine is recommended annually for children aged ≥6 months with certain risk factors (including but not limited to asthma, cardiac disease, sickle cell disease, HIV, and diabetes), healthcare workers, and other persons (including household members) in close contact with persons in groups at high risk (see *MMWR* 2004;53;[RR-6]:1-40) and can be administered to all others wishing to obtain immunity. In addition, healthy children aged 6–23 months and close contacts of healthy children aged 0–23 months are recommended to receive influenza vaccine, because children in this age group are at substantially increased risk for influenza-related hospitalizations. For healthy persons aged 5–49 years, the intranasally administered live, attenuated influenza vaccine (LAIV) is an acceptable alternative to the intramuscular trivalent inactivated influenza vaccine (TIV). See *MMWR* 2004;53;[RR-6]:1-40. Children receiving TIV should be administered a dosage appropriate for their age (0.25 mL if 6–35 months or 0.5 mL if ≥3 years). Children aged ≤8 years who are receiving influenza vaccine for the first time should receive 2 doses (separated by at least 4 weeks for TIV and at least 6 weeks for LAIV).

8. Hepatitis A vaccine. Hepatitis A vaccine is recommended for children and adolescents in selected states and regions and for certain high-risk groups; consult your local public health authority. Children and adolescents in these states, regions, and high-risk groups who have not been immunized against hepatitis A can begin the hepatitis A immunization series during any visit. The 2 doses in the series should be administered at least 6 months apart. See *MMWR* 1999;48(RR-12):1-37.

For additional information about vaccines, including precautions and contraindications for immunization and vaccine shortages, please visit the National Immunization Program Web site at www.cdc.gov/nip/ or call the National Immunization Information Hotline at 800-232-2522 (English) or 800-232-0233 (Spanish).

Approved by the Advisory Committee on Immunization Practices (www.cdc.gov/nip/acip), the American Academy of Pediatrics (www.aap.org), and the American Academy of Family Physicians (www.aafp.org).

Michigan Department of Community Health

MDCH

PCV7 Catch-up Schedule, September 17, 2004

We are now able to follow the recommended schedule for pneumococcal conjugate (PCV7) vaccine. Please use the following table provided by the Centers for Disease Control and Prevention (CDC) as recommended regimens for pneumococcal conjugate vaccine among children with a late start or lapse in vaccine administration.

Age at Examination	Previous PCV7 History	Recommended regimen*
2-6 months	0 doses	3 doses 2 months apart; 4th dose at 12-15 months
	1 dose	2 doses 2 months apart; 4th dose at 12-15 months
	2 doses	1 dose, 2 months after the most recent dose; 4th dose at 12-15 months
7-11 months	0 doses	2 doses 2 months apart; 3rd dose at 12-15 months
	1 or 2 doses before age 7 months	1 dose at 7-11 months, with another dose at 12-15 months (2 months later)
12-23 months	0 doses	2 doses 2 months apart
	1 dose before age 12 months	2 doses 2 months apart
	1 dose at 12 months	1 dose 2 months after the most recent dose
	2 or 3 doses before age 12 months	1 dose 2 months after the most recent dose
24-59 months Healthy children†	Any incomplete schedule	Consider 1 dose 2 months after the most recent dose
24-59 months High risk§	Any incomplete schedule of <3 doses	1 dose 2 months after the most recent dose and another dose 2 months later
	Any incomplete schedule of 3 doses	1 dose 2 months after the most recent dose

* For children vaccinated at age <1 year, the minimum interval between doses is 4 weeks. Doses given at 12 months should be at least 8 weeks apart.

† Providers should consider administering a single dose to unvaccinated, healthy children 24-59 months with priority to children aged 24-35 months, black children, American Indian or Alaska Native children not otherwise identified as high risk, and children who attend group day care centers.

§ Children with sickle cell disease, asplenia, chronic heart or lung disease, diabetes, cerebrospinal fluid leak, cochlear implant, human immunodeficiency virus infection or another immunocompromising condition, and American Indian or Alaska Native children in areas with a demonstrated risk for invasive pneumococcal disease more than twice the national average (i.e., Alaska, Arizona, New Mexico, and Navajo populations in Colorado and Utah.

From MMWR September 17, 2004/ Vol. 53(36);851-852

Assessment, Feedback, Incentives, eXchange of information (AFIX)

AFIX is a quality assurance tool that consists of *assessing* the provider's vaccination coverage levels, *feeding back* that information along with recommending strategies for improvement, providing *incentives* to the provider to improve vaccination levels, and *exchanging* information among the providers within the community about performance and best-practices. This quality assurance measure is a proven and reliable tool for improving vaccination coverage levels in provider offices. The AFIX approach incorporates four key elements to improve immunization service delivery:

- **A**ssessment of immunization coverage of public and private providers
- **F**eedback of diagnostic information to improve service delivery
- **I**ncentives to recognize and reward improved performance
- e**X**change of information among providers

Private providers in Michigan can participate in an AFIX assessment free of charge. The Michigan Department of Community Health (MDCH) AFIX staff will conduct a comprehensive review and analysis of immunization records using patient charts and the Michigan Childhood Immunization Registry. The results of the assessment are presented to the practice staff in a 1-hour presentation, which is eligible for 1.0 continuing education unit. The Michigan AFIX complies with the Michigan Public Health Code and HIPAA privacy rule (Section 164.512 b).

For more information on receiving an AFIX assessment for your practice, contact Stephanie Sanchez at (517) 335-9011. The CDC AFIX website is located at: http://www.cdc.gov/nip/afix.

Request an AFIX for your practice. Complete this form and fax to the MDCH Division of Immunization at (517) 335-9855

Name of Practice:	City:
Contact Person Name:	Title:
Phone: ( )	Fax: ( )
Email:	
Signature of contact person:	

This activity complieswith the Michigan Public Health Code and HIPAA regulations.

Free immunization brochures and materials order form

Order these materials online at http://hpclearinghouse.org

An alternative to ordering online is to fax the order form to (517) 699-2376. For information about orders that have already been placed, call the MDCH Clearinghouse toll-free at (888) 76-SHOTS. Any other questions should be directed to Rosemary Franklin at (517) 335-9485 or franklinr@michigan.gov.

Please enter quantity for each requested item. (Orders for brochures are usually limited to 500, unless otherwise stated. Limits on orders may be temporarily decreased if inventory is low.)

Quantity needed	Item requested
(Limit 1 per office)	**Alliance for Immunization in Michigan (AIM) Provider Tool Kit, 2004** This packet contains up-to-date information for health care professionals who administer vaccines to their patients, including immunization schedules for children and adults, information about contraindications, administration, documentation, and storage and handling of vaccines.
(Limit 5,000 cards per office)	**Adult Immunization Record Card**
(Limit 50 cards per office)	**Influenza Vaccination Pocket Guide –** (the pocket guides are for health care providers ONLY)
(Limit 50 cards per office)	**Pneumococcal Polysaccharide (PPV23) Vaccination Pocket Guide –** (for health care providers)
Quantity needed	**Brochures**
(Limit 1,000 per office)	**Keep Your Family Safe from the Flu** **New brochure**
	If you have diabetes, getting a flu shot is a family affair
	Immunize Your Little Michigander
	Shots for your child (about the Vaccines for Children program) **New brochure**
	Are you 11-19 years old? Then you need to be protected…
	Vaccine Safety – What parents need to know

Quantity needed	Brochures
	Immunizations – They're not just for kids. Are you protected?
	Hepatitis B: What Parents Need to Know (With special information for pregnant women)
	The Dangers of Hepatitis B: What they are, How to avoid them
	Hepatitis, What you need to know (ABCs)
	Antibiotics: What You Should Know
	What is West Nile Virus?

Fax this form to the MDCH Clearinghouse at (517) 699-2376

Name: _____

Type of clinic/practice: ❑ Pediatric ❑ Family Practice ❑ Adult/Internal Med ❑ OB/GYN ❑ Specialty

Email address*: _____

Street address:** _____

City: _____ **State: MI**** **Zip code:** _____

Phone no.: (include area code) _____

*** Complete email address to receive immunization information updates.**

** Reminder: We cannot ship to P.O. boxes. ** Materials are available to Michigan residents only.

What is your preferred format for the AIM Kit? (check all that apply)

- ❑ Paper
- ❑ Internet (web site)
- ❑ CD

For more information or special requests, contact Rosemary Franklin at (517) 335-9485 or franklinr@michigan.gov

Revised September 14, 2004

Michigan Childhood Immunization Registry (MCIR) Regions & Toll-Free Phone Numbers

Region 1 1-888-217-3900

Covers: City of Detroit, Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw & Wayne Counties

Region 2 1-888-217-3901

Covers: Allegan, Berrien, Branch, Calhoun, Cass, Hillsdale, Ionia, Jackson, Kalamazoo, Kent, Lenawee, Muskegon, Ottawa, St. Joseph, & Van Buren Counties

Region 3 1-888-217-3902

Covers: Barry, Clinton, Eaton, Gratiot, Ingham, & Montcalm Counties

Region 4 1-888-217-3903

Covers: Bay, Genesee, Huron, Lapeer, Midland, Saginaw, Sanilac, Shiawassee, & Tuscola Counties

Region 5 1-888-217-3904

Covers: Alcona, Alpena, Antrim, Arenac, Benzie, Charlevoix, Cheboygan, Clare, Crawford, Emmet, Gladwin, Grand Traverse, Iosco, Isabella, Kalkaska, Lake, Leelanau, Manistee, Mason, Mecosta, Missaukee, Montmorency, Newaygo, Oceana, Ogemaw, Osceola, Oscoda, Otsego, Presque Isle, Roscommon, & Wexford Counties

Region 6 1-888-217-3905

Covers: All Upper Peninsula Counties

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Society pays high price for nonmedical vaccination exemption

Reprinted from the IAC Express (Issue 452, March 26, 2004)

On March 19, 2004, CDC published "Brief Report: Imported Measles Case Associated with Nonmedical Vaccine Exemption –Iowa, March 2004" in its electronic publication "MMWR Dispatch." The article recounts the prodigious effort required to notify hundreds, perhaps thousands, of contacts of an unvaccinated 19-year-old man who returned to Iowa from India while contagious with measles.

The article underscores the societal consequences of a parent's decision to withhold vaccination from a child because of religious reasons or personal beliefs. In this instance, the index patient, who had received a nonmedical exemption from measles vaccination, had the potential to infect susceptible people in four airports and on three airline flights across three continents.

Because Detroit Metro was one of the affected airports, many state and local health department personnel in Michigan became involved in this case.

Due to high vaccination levels, measles is uncommon in the United States, with fewer than 200 cases reported annually since 1997. Such rosy statistics may lead some parents to assume measles has been "wiped out," calling into question the need for vaccination. In much of the developing world, however, measles is endemic. In 2002 alone, it infected 30 million susceptible people worldwide and claimed the lives of 614,000 children.

With every passing year, the world grows smaller, as more people travel internationally, coming into contact with people – and diseases – uncommon in their home communities. A parent who insists on vaccine exemption because of religious reasons or personal beliefs makes a decision to deny this reality. More importantly, such parents make a decision to abdicate individual responsibility for the health of communities their children live in, visit, or travel through. It is the quintessential example of a "bad neighbor" policy.

Reported by CDC and local and state public health departments in Iowa and Michigan, the "MMWR Dispatch" article is available online at http://www.cdc.gov/mmwr.